As a below named inventor, I hereby declare that:

This	declaration	is	of the	following	type:
	avoidi dilicii		02 0110		J PT.

[X]	original
[]	divisional
[]	continuation
[]	continuation-in-part

INVENTORSHIP IDENTIFICATION

My residence, post office address and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

TITLE OF INVENTION

ATOMIC LAYER DEPOSITION APPARATUS

SPECIFICATION IDENTIFICATION

The specification of which:

[X]	filed herewith;			
	was filed on,	under Serial No.	, executed	on even date
	herewith; or			
[]	Express Mail No.	_ (Serial No. not yet known)		
	and was amended on	(if applicable)		
[]	was described and claimed in PC	Γ International Application No.		filed on
-	and as amended	under PCT Article 19 on	·	

ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose all information I know to be material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56, and which is material to the examination of this application; namely, information where there is a substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent, and

[X] In compliance with this duty there is attached an Information Disclosure Statement in accordance with 37 CFR §1.98.

PRIORITY CLAIM (35 U.S.C. §119)

before	that of the application	n(s) of which priority is cla	imed.			
	[X] No such applications have been filed.					
	[] Such appl	lications have been filed as	follows:			
A.		Γ application(s) filed with as under 35 U.S.C. §119	nin 12 mos. (6 mos. for desi	gn) prior to this application, and		
	Country/PCT	Application No	Date Filed	Priority Claimed		
				[] Yes [] No [] Yes [] No [] Yes [] No		
В.	All foreign applica U.S. application	ation(s), if any, filed more	e than 12 mos. (6 mos for de	esign) prior to this		
	Country: Application No: Filing date:					
C.	U.S. Provisional A	application filed within 12	2 months prior to this appli	cation		
		Serial No.	Filing Date			
		PRIORITY C	LAIM (35 U.S.C. §120)			
PCT in subject	nternational application to matter of each of t	on(s) designating the Unite the claims of this applica	ed States of America that is/a tion is not disclosed in tha	any United States application(s) or are listed below and, insofar as the t/those prior application(s) in the n 112. I acknowledge the duty to		

PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose information that is material to the examination of this application (namely, information where there is substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

[X] No such applications have been filed Such application have been filed, as follows:				
		S	Status	
Serial No.	Filing Date	Patented Pending	Abandoned	

POWER OF ATTORNEY

Donald Verplancken	Registration No. 33,217
Peter J. Sgarbossa	Registration No. 25,610
Lawrence Edelman	Registration No. 25,226
Raymond Kam-On Kwong	Registration No. 37,165
James C. Wilson	Registration No. 35.412

Michael B. Einschlag Registration No. 29,301 Robert W. Mulcahy Registration No. 25,436 Walter Benjamin Glenn Registration No. 44,713 Joseph Bach Registration No. 37,771 B. Todd Patterson Registration No. 37,906 Registration No. 34,682 Raymond R. Moser, Jr. Keith M. Tackett Registration No. 32,008 Joseph Pagnotta Registration No. 39,322

Send correspondence to:

Direct telephone calls to:

Patent Counsel

Patricia A. Verlangieri

APPLIED MATERIALS, INC.

THOMASON, MOSER & PATTERSON, L.L.P.

P. O. Box 450-A

Full name of sole or first inventor: BARRY L. CHIN

Telephone No. 732-530-9404

Santa Clara, CA 95052

DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and, further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Sec. 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Beng L. Un Date: 1/2/01 Inventor's signature: Residence: Saratoga, CA 95070 Post Office Address: Country of Citizenship: U.S.A. Same as above Full name of second inventor: ALFRED W. MAK Inventor's signature: Date: Residence: 32722 Fellows Court Union City, CA 94587 Post Office Address: Same as above Country of Citizenship: U.S.A. Full name of third inventor: LAWRENCE CHUNG-LAI LEI Inventor's signature: Date: 1594 Country Club Drive Residence: Milpitas, CA 95035 Post Office Address: Same as above Country of Citizenship: U.S.A.

Residence:

Post Office Address:

Full name of fourth inventor: MING XI

Inventor's signature: Date: Residence: 151 Churchill Avenue Palo Alto, CA 94306 Post Office Address: Same as above Country of Citizenship: P.R. of China Full name of fifth inventor: HUA CHUNG Inventor's signature: Date:_ Residence: 4645 Piper Drive San Jose, CA 95129 Post Office Address: Same as above Country of Citizenship: Taiwan Full name of sixth inventor: KEN KAUNG LAI Inventor's signature: Date: Residence: 1354 Terra Alta Drive Milpitas, CA 95035 Post Office Address: Same as above Country of Citizenship: Taiwan Full name of seventh inventor: JEONG SOO BYUN Inventor's signature: Date:

20975 Valley Green Drive #257

Cupertino, CA 95014

Same as above

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PRIORITY CLAIM (35 U.S.C. §119)

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[X] No	such applications have been	filed.	
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	n/PCT application(s) filed claims under 35 U.S.C. §1	within 12 mos. (6 mos. for design	ı) prior to this application, and
Country/PC	Application No	Date Filed	Priority Claimed
			[] Yes [] No [] Yes [] No [] Yes [] No
B. All foreign a U.S. applica		nore than 12 mos. (6 mos for desi	gn) prior to this
Country: Application I Filing date:	No:		
C. U.S. Provision	onal Application filed withi	n 12 months prior to this applica	tion
	Serial No.	Filing Date	
	PRIORIT	Y CLAIM (35 U.S.C. §120)	
PCT international app subject matter of eac manner provided by disclose information substantial likelihood application to issue a or PCT international f	clication(s) designating the Ush of the claims of this app the first paragraph of Title that is material to the examination that a reasonable Examination	I States Code, Section 120, of any United States of America that is/ar plication is not disclosed in that/35, United States Code, Section mination of this application (namer would consider it important in between the filing date of the priorities.)	e listed below and, insofar as the those prior application(s) in the 112, I acknowledge the duty to ally, information where there is a deciding whether to allow the
	h application have been filed		
		Status	
Serial No.	<u>Filing Date</u>	Patented Pending Ab	<u>andoned</u>

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Full name of sole or first inventor: BARRY L. CHIN

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Inventor's signature: Date: 13174 Cumberland Drive Residence: Saratoga, CA 95070 Country of Citizenship: U.S.A. Post Office Address: Same as above Full name of second inventor: ALFRED W. MAK Inventor's signature: Residence: Union City, CA 94587 Post Office Address: Country of Citizenship: U.S.A. Same as above Full name of third inventor: LAWRENCE CHUNG-LAI LEI Inventor's signature: Date: 1594 Country Club Drive Residence: Milpitas, CA 95035 Country of Citizenship: U.S.A. Post Office Address: Same as above

Post Office Address:

Same as above

Inventor's signature: Date: Residence: 151 Churchill Avenue Palo Alto, CA 94306 Post Office Address: Same as above Country of Citizenship: P.R. of China Full name of fifth inventor: HUA CHUNG Inventor's signature: Date: Residence: 4645 Piper Drive San Jose, CA 95129 Post Office Address: Same as above Country of Citizenship: Taiwan Full name of sixth inventor: KEN KAUNG LAI Inventor's signature: Date: Residence: 1354 Terra Alta Drive Milpitas, CA 95035 Post Office Address: Same as above Country of Citizenship: Taiwan Full name of seventh inventor: JEONG SOO BYUN Inventor's signature: Date:_ Residence: 20975 Valley Green Drive #257 Cupertino, CA 95014

Full name of fourth inventor: MING XI

As a below named inventor, I hereby declare that:

This declaration is of the follo	owing	type:
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and was amended on (if applicable)		
was described and claimed in PCT International Application No.		filed on
and as amended under PCT Article 19 on	•	
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PRIORITY CLAIM (35 U.S.C. §119)

be	efore that of	the applic	ation(s) of which priori	ty is claimed.					
	[X]	No su	ich applications have be	een filed.					
	[]	Such	applications have been	filed as follow	s:				
A			PCT application(s) fil laims under 35 U.S.C.		mos. (6 mos.	for design) p	rior to thi	s applicatio	on, and
	<u>Co</u>	untry/PCT	Application No		Date Filed		Priority (Claimed	
							[] Yes [] Yes [] Yes	[] No	
В.		oreign ap application	plication(s), if any, file on	ed more than i	12 mos. (6 me	os for design)	prior to t	his	
		ntry: lication No g date:	o:						
C.	. U.S.	Provision	al Application filed w	ithin 12 mont	hs prior to th	is application	ı		
			Serial No.		<u>Fili</u>	ng Date	,		
		L	PRIOR	ITY CLAIM	(35 U.S.C. §1	120)			
PC su m: di su ap	CT internati bject matte anner provi sclose infor bstantial lii plication to PCT intern	onal applier of each ided by the rmation the kelihood to issue as a ational fili	efit under Title 35, Un cation(s) designating the of the claims of this e first paragraph of Titat is material to the ethat a reasonable Exama patent) which occurring date of this application	ited States Cone United State application is itle 35, United examination on inner would cred between the ion.	de, Section 1 es of America not disclose 1 States Code f this applica consider it im	20, of any Un that is/are list d in that/thost, Section 112 tion (namely,	ted below e prior ap , I acknow informat ciding wh	and, insofa oplication(s) wledge the ion where the tether to all	r as the) in the duty to there is low the
	[X]		ch applications have be application have been f		s:				
						Status			
	<u>Seria</u>	al No.	Filing Date	Patente	ed Pending	Abando	oned		

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Post Office Address: Same as above

Post Office Address:

Full name of fourth inventor: MING XI

Inventor's signature: Date: Residence: 151 Churchill Avenue Palo Alto, CA 94306 Post Office Address: Same as above Country of Citizenship: P.R. of China Full name of fifth inventor: HUA CHUNG Inventor's signature: Date: Residence: 4645 Piper Drive San Jose, CA 95129 Post Office Address: Same as above Country of Citizenship: Taiwan Full name of sixth inventor: KEN KAUNG LAI Inventor's signature: Date: Residence: 1354 Terra Alta Drive Milpitas, CA 95035 Post Office Address: Same as above Country of Citizenship: Taiwan Full name of seventh inventor: JEONG SOO BYUN Inventor's signature: Date: Residence: 20975 Valley Green Drive #257

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A.			Γ application(s) filed with as under 35 U.S.C. §119	n 12 mos. (6 mos. for d	lesign) prior to	this application, and
	<u>Coun</u>	try/PCT	Application No	Date Filed	<u>Priori</u>	ty Claimed
					[] Y	res [] No res [] No res [] No
В.		eign application	ation(s), if any, filed more	than 12 mos. (6 mos for	design) prior t	to this
	Countr Applica Filing of	ation No:				
C.	U.S. P	rovisional A	application filed within 12	months prior to this ap	plication	
			Serial No.	Filing D	ate	
			PRIORITY CL	AIM (35 U.S.C. §120)		
PCT in subject manne disclos substan applica	ternation matter of provide e inform tial like	al application of each	under Title 35, United State on(s) designating the United the claims of this applicated the rest paragraph of Title 35, is material to the examinate a reasonable Examiner we tent) which occurred between this application.	I States of America that ion is not disclosed in United States Code, Sec ion of this application ould consider it importa	is/are listed bel that/those prior ction 112, I ack (namely, informant in deciding	ow and, insofar as the application(s) in the mowledge the duty to nation where there is whether to allow the
	[X]		pplications have been filed	ollows:		

POWER OF ATTORNEY

Patented Pending

Status_

Abandoned

I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith:

Donald Verplancken	Registration No. 33,217
Peter J. Sgarbossa	Registration No. 25,610
Lawrence Edelman	Registration No. 25,226
Raymond Kam-On Kwong	Registration No. 37,165
James C. Wilson	Registration No. 35.412

Filing Date

Serial No.

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Post Office Address:

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	Cour	ntry/PCT	Application No	Date Filed	Priority Claimed
					[] Yes [] No [] Yes [] No [] Yes [] No
В.		reign applic pplication	eation(s), if any, filed more	than 12 mos. (6 mos for	design) prior to this
	Count Applic Filing	cation No:			
C.	U.S. P	rovisional A	Application filed within 12	months prior to this app	lication
			Serial No.	Filing Da	<u>te</u>
			PRIORITY CI	LAIM (35 U.S.C. §120)	
PCT i subject manned disclo substata applic	nternation to matter providese informatial like ation to i	nal application of each of each of ed by the fination that selihood that ssue as a pational filing of the state of the sta	on(s) designating the United the claims of this applicated rest paragraph of Title 35, is material to the examinated a reasonable Examiner waternt) which occurred between the content of this application.	d States of America that it ion is not disclosed in the United States Code, Section of this application (could consider it importanteen the filing date of the	any United States application(s) or s/are listed below and, insofar as the nat/those prior application(s) in the ion 112, I acknowledge the duty to namely, information where there is at in deciding whether to allow the prior application(s) and the national
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Santa Clara, CA 95052

DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and, further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Sec. 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Full name of sole or fir	st inventor: BARRY L. CHIN	
Inventor's signature: Residence:	13174 Cumberland Drive Saratoga, CA 95070	Date:
Post Office Address:	Same as above	Country of Citizenship: U.S.A.
Full name of second in	ventor: ALFRED W. MAK	
Inventor's signature: Residence:	32722 Fellows Court Union City, CA 94587	Date:
Post Office Address:	Same as above	Country of Citizenship: U.S.A.
Full name of third inve	ntor: LAWRENCE CHUNG-LAI LEI	
Inventor's signature: Residence:	1594 Country Club Drive Milpitas, CA 95035	Date:
Post Office Address:	Same as above	Country of Citizenship: U.S.A.

Residence:

Post Office Address:

Inventor's signature: Date: Residence: 151 Churchill Avenue Palo Alto, CA 94306 Post Office Address: Same as above Country of Citizenship: P.R. of China Full name of fifth inventor: HUA CHUNG Date: 1/25/0/ Inventor's signature: Residence: 4645 Piper Drive San Jose, CA 95129 Post Office Address: Same as above Country of Citizenship: Taiwan Full name of sixth inventor: KEN KAUNG LAI Inventor's signature: Date: Residence: 1354 Terra Alta Drive Milpitas, CA 95035 Post Office Address: Same as above Country of Citizenship: Taiwan Full name of seventh inventor: JEONG SOO BYUN Inventor's signature: Date:

20975 Valley Green Drive #257

Cupertino, CA 95014

Same as above

Full name of fourth inventor: MING XI

As a below named inventor, I hereby declare that:

This declaration	is of th	ne following	type

[X]	original
[]	divisional
[]	continuation
[]	continuation-in-part

INVENTORSHIP IDENTIFICATION

My residence, post office address and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

TITLE OF INVENTION

ATOMIC LAYER DEPOSITION APPARATUS

SPECIFICATION IDENTIFICATION

The specification of which:

[X]	filed herewith;	
[]	was filed on, under Serial No, executed on even	date
	herewith; or	
[]	Express Mail No (Serial No. not yet known)	
	and was amended on (if applicable)	
[]	was described and claimed in PCT International Application No. filed	l or
	and as amended under PCT Article 19 on	

ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose all information I know to be material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56, and which is material to the examination of this application; namely, information where there is a substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent, and

[X] In compliance with this duty there is attached an Information Disclosure Statement in accordance with 37 CFR §1.98.

PRIORITY CLAIM (35 U.S.C. §119)

before that of the application(s) of which priority is claimed.						
	[X] No such applications have been filed.					
	[]	Such applic	cations have been filed	as follows:		
A.			application(s) filed wi under 35 U.S.C. §119		for design) prior to	this application, and
	Count	ry/PCT	Application No	Date Filed	Prior	ity Claimed
					[] \	Yes [] No Yes [] No Yes [] No
В.		eign applicat plication	ion(s), if any, filed mo	re than 12 mos. (6 mo	os for design) prior	to this
	Country Applica Filing d	tion No:				
C.	U.S. Pr	ovisional Ap	plication filed within	12 months prior to th	is application	
			Serial No.	<u>Fili</u>	ing Date	
			PRIORITY	CLAIM (35 U.S.C. §1	120)	
PCT int subject manner disclose substan applicat	PRIORITY CLAIM (35 U.S.C. §120) I hereby claim the benefit under Title 35, United States Code, Section 120, of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose information that is material to the examination of this application (namely, information where there is substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.					

	Such application have been filed, as follows:			
			Status	
Serial No.	Filing Date	Patented Pending	Abandoned	

POWER OF ATTORNEY

Donald Verplancken	Registration No. 33,217
Peter J. Sgarbossa	Registration No. 25,610
Lawrence Edelman	Registration No. 25,226
Raymond Kam-On Kwong	Registration No. 37,165
James C. Wilson	Registration No. 35,412

Michael B. Einschlag Registration No. 29,301 Robert W. Mulcahy Registration No. 25,436 Walter Benjamin Glenn Registration No. 44,713 Joseph Bach Registration No. 37,771 B. Todd Patterson Registration No. 37,906 Raymond R. Moser, Jr. Registration No. 34,682 Keith M. Tackett Registration No. 32,008 Joseph Pagnotta Registration No. 39,322

Send correspondence to:

Direct telephone calls to:

Patent Counsel

Patricia A. Verlangieri

APPLIED MATERIALS, INC.

THOMASON, MOSER & PATTERSON, L.L.P.

P. O. Box 450-A

Telephone No. 732-530-9404

Santa Clara, CA 95052

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Post Office Address:

Same as above

Eull name of fourth inventor: MING XI

Inventor's signature: Date: Residence: 151 Churchill Avenue Palo Alto, CA 94306 Post Office Address: Same as above Country of Citizenship: P.R. of China Full name of fifth inventor: HUA CHUNG Inventor's signature: Date: Residence: 4645 Piper Drive San Jose, CA 95129 Post Office Address: Same as above Country of Citizenship: Taiwan Full name of sixth inventor: KEN KAUNG LAI 7/23/200 Inventor's signature: Residence: 1354 Terra Alta Drive Milpitas, CA 95035 Post Office Address: Same as above Country of Citizenship: Taiwan Full name of seventh inventor: JEONG SOO BYUN Inventor's signature: Date: Residence: 20975 Valley Green Drive #257 Cupertino, CA 95014

As a below named inventor, I hereby declare that:

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[X] In compliance with this duty there is attached an Information Disclosure Statement in accordance with 37 CFR §1.98.

PRIORITY CLAIM (35 U.S.C. §119)

Serial No.

Filing Date

before	that of th	e applicatior	n(s) of which priority is claime	ed.	
	[X]	No such a	pplications have been filed.		
	[]	Such appl	ications have been filed as fol	lows:	
A.			application(s) filed within s under 35 U.S.C. §119	12 mos. (6 mos. for de	sign) prior to this application, and
	Coun	try/PCT	Application No	Date Filed	Priority Claimed
					[] Yes [] No [] Yes [] No [] Yes [] No
В.		eign applica	tion(s), if any, filed more th	an 12 mos. (6 mos for	design) prior to this
	Country Applied Filing of	ation No:			
C.	U.S. Pı	rovisional A	pplication filed within 12 m	onths prior to this app	lication
			Serial No.	Filing Da	t <u>e</u>
			PRIORITY CLA	IM (35 U.S.C. §120)	
I hereby claim the benefit under Title 35, United States Code, Section 120, of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose information that is material to the examination of this application (namely, information where there is substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.					
	[X]		pplications have been filed cation have been filed, as foll	ows:	

POWER OF ATTORNEY

Patented Pending

Status

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Post Office Address:

Same as above

Full name of fourth inventor: MING XI

Inventor's signature: Date: 151 Churchill Avenue Residence: Palo Alto, CA 94306 Post Office Address: Same as above Country of Citizenship: P.R. of China Full name of fifth inventor: HUA CHUNG Inventor's signature: Date: 4645 Piper Drive Residence: San Jose, CA 95129 Post Office Address: Same as above Country of Citizenship: Taiwan Full name of sixth inventor: KEN KAUNG LAI Inventor's signature: Date: Residence: 1354 Terra Alta Drive Milpitas, CA 95035 Post Office Address: Country of Citizenship: Taiwan Same as above Full name of seventh inventor: JEONG SOO BYUN Inventor's signature: 20975 Valley Green Drive #257 Residence: Cupertino, CA 95014